

## **CLAIM AMENDMENTS**

### **Claim Amendment Summary**

#### **Claims pending**

- Before this Amendment: Claims 1-6, 8, 9 and 12-18.
- After this Amendment: Claims 1, 4-6, 8, 9, 12-14, and 16-18.

**Non-Elected, Canceled, or Withdrawn claims:** Claims 2, 3 and 15

**Amended claims:** 1, 9 and 13

**New claims:** None

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**Claims:**

**1. (Currently Amended)** A processor-readable medium having processor-executable instructions that, when executed by a processor, performs acts comprising:

obtaining a digital good;

partitioning the digital good into a plurality of regions;

calculating rational statistics of one or more the regions of the plurality, so that the statistics of a region are representative of the region, wherein the calculating comprises generating the rational statistics of one or more regions of the plurality via a hashing function having ~~quotient~~ a quotient of two weighted, linear, statistical combinations and wherein the rational statistics are semi-global characteristics and the denominator of the quotient is not one;

quantizing the rational statistics;

marking the digital good with the quantized rational statistics of the plurality of the regions.

**2. (Canceled)**

**3. (Canceled)**

**4. (Previously Presented)** A medium as recited in claim 1,

wherein the hashing function is

$$h_i = \frac{\sum_{j \in R_i} \alpha_{ij} s_j}{\sum_{j \in R_i} b_{ij} s_j}$$

where:

- $\alpha_{ij}$  is the  $j^{\text{th}}$  element of  $\alpha_i$  and  $\alpha_i$  are a pseudo-random generated weight factors;
- $b_{ij}$  is the  $j^{\text{th}}$  element of  $b_i$  and  $b_i$  are a pseudo-random generated weight factors;
- $s$  denotes the digital good of dimension  $N \times 1$ ;
- $R_i$  are the plurality of regions, where  $R_i \subseteq \{1, 2, \dots, N\}$ .

**5. (Original)** A medium as recited in claim 1, wherein the partitioning comprises segmenting the digital good into a plurality of overlapped regions.

**6. (Original)** A medium as recited in claim 1, wherein the marking comprises embedding a watermark via quantization.

**7. (Cancelled)**

**8. (Original)** A computer comprising one or more processor-readable media as recited in claim 1.

**9. (Currently Amended)** A processor-readable medium having processor-executable instructions that, when executed by a processor, performs acts comprising

obtaining a digital good; and

using quantization, marking the digital good with a watermark, wherein such quantization is based upon semi-global characteristics of regions of the digital good, wherein such semi-global characteristics are generated via a hashing function employing a quotient of at least two weighted linear combinations of statistics of the regions of the digital good, wherein the denominator of the quotient is not one.

**10. (Cancelled)**

**11. (Cancelled)**

**12. (Original)** A computer comprising one or more processor-readable media as recited in claim 9.

**13. (Currently Amended)** A system for facilitating the protection of digital goods, the system comprising:

a partitioner configured to segment a digital good into a plurality of regions;

a region-statistics calculator configured to calculate rational statistics of one or more of the plurality of regions, wherein the statistics of a region are representative of that region, wherein the region-statistics calculator is further configured to generate the rational statistics of one or more regions of the plurality via a hashing function having a quotient of two weighted, linear, statistical combinations and wherein the rational statistics are semi-global characteristics and the denominator of the quotient is not one;

a region quantizer configured to quantize the rational statistics of a region;

a digital-goods marker configured to generate a marked good using the quantized rational statistics.

**14. (Original)** A system as recited in claim 13, wherein the region-statistics calculator is further configured to generate the rational statistics of one or more regions of the plurality via a hashing function.

**15. (Canceled)**

**16. (Original)** A system as recited in claim 13, wherein the partitioner is further configured to segment a digital good into a plurality of overlapping regions.

**17. (Previously Presented)** A system as recited in claim 13, wherein the hashing function is

$$h_i = \frac{\sum_{j \in R_i} \alpha_{ij} s_j}{\sum_{j \in R_i} b_{ij} s_j}$$

where:

- $\alpha_{ij}$  is the  $j^{\text{th}}$  element of  $\alpha_i$  and  $\alpha_i$  are a pseudorandom generated weight factors;
- $b_{ij}$  is the  $j^{\text{th}}$  element of  $b_i$  and  $b_i$  are a pseudorandom generated weight factors;
- $s$  denotes the digital good of dimension  $N \times 1$ ;

- $R_i$  are the plurality of regions, where  $R_i \subseteq \{1,2,\dots,N\}$ .

**18. (Previously Presented)** A processor-readable medium having processor-executable instructions that, when executed by a processor, performs acts comprising:

obtaining a digital good;

partitioning the digital good into a plurality of regions, wherein the partitioning comprises segmenting the digital good into a plurality of overlapped regions;

calculating rational statistics of one or more the regions of the plurality, so that the statistics of a region are representative of the region, wherein the rational statistics are semi-global characteristics;

quantizing the rational statistics;

marking the digital good with the quantized rational statistics of the plurality of the regions, wherein the marking comprises embedding a watermark via quantization,

wherein the calculating comprises generating the rational statistics of one or more regions of the plurality via a hashing function,  $h$ , that hashing function having quotient of two weighted, linear, statistical combinations, and where

$$h_i = \frac{\sum_{j \in R_i} \alpha_{ij} s_j}{\sum_{j \in R_i} b_{ij} s_j}$$

where:

- $a_{ij}$  is the  $j^{\text{th}}$  element of  $a_i$  and  $a_i$  are a pseudo-random generated weight factors;
  - $b_{ij}$  is the  $j^{\text{th}}$  element of  $b_i$  and  $b_i$  are a pseudo-random generated weight factors;
  - $s$  denotes the digital good of dimension  $N \times 1$ ;
- $R_i$  are the plurality of regions, where  $R_i \subseteq \{1,2,\dots,N\}$ .